

IN THE CLAIMS:

Please cancel claims 1-35 without prejudice.

Please add claims 36-74 as follows:

Sub 36. (New) A test apparatus for testing a semiconductor device, said test apparatus comprising:  
a contactor comprising a first plurality of terminals;  
an interposer comprising:

a substrate,

a first plurality of elongate, resilient contact elements disposed on a first side of said substrate, ones of said first plurality of contact elements being in contact with ones of said first plurality of terminals, and

a second plurality of elongate, resilient contact elements disposed on a second side of said substrate, ones of said first plurality of contact elements being electrically connected to ones of said second plurality of contact elements; and

At a base for supporting said semiconductor device, said base configured to move said semiconductor device such that ones of a second plurality of terminals on said semiconductor device contact ones of said second plurality of contact elements.

37. (New) The test apparatus of claim 36, wherein each of said contact elements of at least one of said first plurality of contact elements and said second plurality of contact elements are lithographically formed.

38. (New) The test apparatus of claim 37, wherein each of said contact elements of said first plurality of contact elements and said second plurality of contact elements are lithographically formed.

39. (New) The test apparatus of claim 36, wherein each of said contact elements of at least one of said first plurality of contact elements and said second plurality of contact elements comprise a cantilever beam.

40. (New) The test apparatus of claim 39, wherein each of said contact elements of said first plurality of contact elements and said second plurality of contact elements comprise a cantilever beam.

5-682) 41. (New) The test apparatus of claim 36, wherein said first plurality of contact elements are disposed on said first side of said substrate at a first pitch, and said second plurality of contact elements are disposed on said second side of said substrate at a second pitch different than said first pitch.

42. (New) The test apparatus of claim 36, wherein said substrate is flexible.

43. (New) The test apparatus of claim 36, wherein said substrate comprises silicon.

44. (New) The test apparatus of claim 36 further comprising an electronic device disposed on said substrate.

At 45. (New) The test apparatus of claim 44, wherein said electronic device is disposed between ones of said contact elements.

cont. 46. (New) The test apparatus of claim 44 further comprising a plurality of said electronic devices.

47. (New) The test apparatus of claim 46, wherein at least one of said plurality of electronic devices is disposed on said first side of said substrate between ones of said first plurality of contact elements, and at least another of said plurality of electronic devices is disposed on said second side of said substrate between ones of said second plurality of contact elements.

48. (New) The test apparatus of claim 36, wherein said ones of said first plurality of contact elements are compressed against said ones of said first plurality of terminals

49. (New) The test apparatus of claim 48 further comprising a stop structure for limiting compression of said first plurality of contact elements.

50. (New) The test apparatus of claim 36 further comprising a stop structure for limiting compression of said second plurality of contact elements
51. (New) The test apparatus of claim 36, wherein said contactor comprises an integrated circuit.
52. (New) The test apparatus of claim 51, wherein said contactor comprises a plurality of integrated circuits.
53. (New) The test apparatus of claim 51, wherein said first plurality of terminals are disposed on said integrated circuit.
54. (New) The test apparatus of claim 51, wherein said integrated circuit comprises circuitry for testing said semiconductor device.
55. (New) The test apparatus of claim 36, wherein said semiconductor device is an unsingulated wafer.
56. (New) The test apparatus of claim 36, wherein said semiconductor device comprises a plurality of singulated dice.
57. (New) The test apparatus of claim 36, wherein said contactor comprises a plurality of tile substrates.

at  
e/  
cont.

Sub 33  
58. (New) A test apparatus for testing a semiconductor device, said test apparatus comprising:  
a contactor comprising a first plurality of terminals;  
an interposer comprising:  
a substrate,  
a first plurality of contact elements disposed on a first side of said substrate,  
and  
a second plurality of contact elements disposed on a second side of said substrate, ones of said first plurality of contact elements being electrically connected to ones of said second plurality of contact elements;  
a support, said interposer moveably disposed in said support, said interposer moveable between a first position in which said first plurality of contact elements do not contact said first plurality of terminals and a second position in which ones of said first plurality of contact elements contact ones of said first plurality of terminals; and  
a base for supporting said semiconductor device, said base configured to move said semiconductor device such that ones of a second plurality of terminals on said semiconductor device contact ones of said second plurality of contact elements and further move said semiconductor device such that said interposer moves from said first position to said second position.

At  
cont.

59. (New) The test apparatus of claim 58, wherein each of said contact elements of at least one of said first plurality of contact elements and said second plurality of contact elements are resilient.

60. (New) The test apparatus of claim 58, wherein each of said contact elements of at least one of said first plurality of contact elements and said second plurality of contact elements are lithographically formed.

61. (New) The test apparatus of claim 58, wherein each of said contact elements of at least one of said first plurality of contact elements and said second plurality of contact elements comprise a cantilever beam.

Sub 04 62. (New) The test apparatus of claim 58, wherein said first plurality of contact elements are disposed on said first side of said substrate at a first pitch, and said second plurality of contact elements are disposed on said second side of said substrate at a second pitch different than said first pitch.

63. (New) The test apparatus of claim 58, wherein said substrate is flexible.

64. (New) The test apparatus of claim 58, wherein said substrate comprises silicon.

65. (New) The test apparatus of claim 58 further comprising an electronic device disposed on said substrate.

66. (New) The test apparatus of claim 65, wherein said electronic device is disposed between ones of said contact elements.

67. (New) The test apparatus of claim 65 further comprising a plurality of said electronic devices.

68. (New) The test apparatus of claim 67, wherein at least one of said plurality of electronic devices is disposed on said first side of said substrate between ones of said first plurality of contact elements, and at least another of said plurality of electronic devices is disposed on said second side of said substrate between ones of said second plurality of contact elements.

Conf. Sub 05 69. (New) The test apparatus of claim 58, wherein said first plurality of contact elements are resilient and are compressed while said interposer is in said second position.

70. (New) The test apparatus of claim 69 further comprising a stop structure for limiting compression of said first plurality of contact elements.

71. (New) The test apparatus of claim 58, wherein said contactor comprises an integrated circuit.

72. (New) The test apparatus of claim 71, wherein said contactor comprises a plurality of integrated circuits.

73. (New) The test apparatus of claim 71, wherein said first plurality of terminals are disposed on said integrated circuit.

74. (New) The test apparatus of claim 71, wherein said integrated circuit comprises circuitry for testing said semiconductor device.